

Title (en)

A containerless processing method for materials under a state of compensated-gravitation and an apparatus therefor

Title (de)

Verfahren zur behälterlosen Behandlung von sich in einem Zustand von kompensierter Schwerkraft befindlichen Materialien und Vorrichtung dafür

Title (fr)

Méthode de traitement sans conteneur pour des matériaux dans un état de gravitation compensée et appareil pour cette méthode

Publication

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Application

EP 92108691 A 19920522

Priority

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Abstract (en)

[origin: EP0515999A2] The present invention is to provide a processing method of a material under a state of compensated-gravitation, the method which is capable of forming an easy-handling weightless state for a long period time at low cost in a simple manner and which can contribute to developing useful materials and novel materials and supplying them in bulk; and the apparatus thereof. A pressure medium composed of plural kinds of fluids each of which has a different density is charged in a pressure chamber(1) forming, for example, fluid layers. A material(4, 5) is suspended by way of buoyancy brought by this pressure medium. By properly controlling the density of the pressure medium of plural kinds of fluids, a various kinds of materials having different densities can be supported in a suspending state at an almost constant pressure. <IMAGE>

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Cited by

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